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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/936,674	01/04/2002	Wolfgang Kroeber	AZ.2825	9113

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EXAMINER	
FOX, CHARLES A	

ART UNIT	PAPER NUMBER
3652	

DATE MAILED: 02/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/936,674	KROEBER, WOLFGANG	
	Examiner	Art Unit	
	Charles A. Fox	3652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondenc address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 December 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *14-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *14-16,18,20,21 and 25* is/are rejected.

7)☒ Claim(s) *17,19,22-24 and 26-33* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *04 January 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 14-18,20 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kishi in view of Dimock. In regards to claims 14 and 15 Kishi US 5,437,777 teaches an apparatus for treating substrates comprising:

a first process container (3) provided with at least one opening (5) in a vertical wall of said first container;

wherein said first container is closable from outside via a substrate (1);

a second process container (n0t numbered) disposed adjacent to said first container;

wherein said wall with opening is common to both containers.

Kishi does not teach a closure means for the opening located inside the first container.

Dimock US 4,523,985 teaches an apparatus for processing a wafer comprising:

a wafer chuck assembly (105) that seals against a process chamber by rim member (127);

wherein said process chamber (12) is sealed from the inside by sealing member (15) when said chamber is not processing a wafer.

It would have been obvious to one of ordinary skill in the art, at the time of invention to provide the apparatus taught by Kishi with a sealing arrangement as taught by Dimock in order to maintain the process chamber at a specified pressure while changing out the wafers to be processed, thereby saving cycle time by not having to evacuate the process chamber for each wafer.

In regards to claim 16 Kishi further teaches a sealing element that forms a lip said opening (5) in said first wall. See figure 5.

In regards to claim 18 Kishi also teaches contact elements (20) being provided to establish an electrical contact with the surface of the wafer being processed.

In regards to claim 20 Kishi further teaches providing an electrode (21) across from said opening in the first container.

In regards to claim 25 Kishi also teaches that at least one treatment fluid is introducible into the said first container, wherein said fluid contains AU electrolytes for coating the wafer.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kishi and Dimock as applied to claim 20 above, and further in view of Jorné et al. Kishi and Dimock teach the limitations of claim 20 as above, they do not teach the anode as having hole through which at least one fluid passes. Jorné et al. teach a distributor (21) for electrolytes that is porous. It would have been obvious to one of ordinary skill in the art, at the time of invention to provide the device taught by Kishi and Dimock with a porous anode as taught by Jorné et al. in order to control the deposition of electrolyte onto the wafer.

Allowable Subject Matter

Claims 17,19,22-24 and 26-33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The undercut being formed on the sealing element as set forth in claim 17 is not taught or suggested in the closest prior art of Kishi. Claim 19 has the limitation of the contact element extending into the undercut. This structural limitation is not taught or suggested by the closest prior art of Kishi. Claim 22 has the limitation of an electrode being used to seal the hole in said first container. This limitation is not taught or suggested in any of the cited prior art. Claims 23 and 24 which depend from claim 22 will be in condition for allowance once claim 22 is placed into condition for allowance.

Claim 26 has the limitation of the second chamber being of a type that is incompatible with the second chamber taught by Kishi, therefore the limitation distinguishes over the Kishi reference.

Claim 27 provides for a structure of a wafer holder that is not suggested or taught by the closest prior art of Kishi or Dimock. Claims 28-33 which depend from claim 27 will be in condition for allowance once claim 27 is placed into condition for allowance.

Response to Arguments

Applicant's arguments filed December 8, 2003 have been fully considered but they are not persuasive. In regards to the arguments against the rejection of claim 14, it is noted that claim 14 does not recite that the common wall between the first and second process chambers must have the chambers on opposite sides of the wall. Also

the opening in the first chamber is not being claimed as opening into the second chamber as argued, therefore the structure taught by Kishi reads on the claim as written. In regards to the Kishi and Dimock references being nonanalogous art as asserted by the applicant, both references teach closing a process chamber with a wafer that is held against an opening in the process chamber. As this is a main feature of the instant invention one of ordinary skill in the art would look to references where this task is accomplished. As both the references seal a process chamber by pressing a wafer against an opening in said chamber they are analogous and one of ordinary skill in the art would look to them. As the structure being argued is not present in the claims and the art used in the rejections is considered analogous the original rejection stands as presented before.

In regards to the arguments that the O-ring taught by Kishi for sealing the opening does not constitute a periphery of said opening, the examiner stands by the earlier rejection. The O-ring defines the area of the wafer that is made available to the process chamber, therefore the periphery of the effective opening from the chamber to the wafer is the O-ring.

In regards to the rejection of claim 21 Jorne' et al. teach pumping an electrolyte through a porous plate before impinging it onto a wafer. One of ordinary skill in the art would know this plate can be the anode plate in order for the device to work as intended. Therefore it would be obvious to one of ordinary skill in the art to use a porous anode plate in a similar environment. Claim 21 stands rejected as before.

Applicant's arguments, see paper #10, filed December 8, 2003, with respect to claims 17 and 26 have been fully considered and are persuasive. The rejections of claims 17 and 26 have been withdrawn has been withdrawn.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles A. Fox whose telephone number is 703-605-4294. The examiner can normally be reached between 7:00-5:00 Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen D. Lillis can be reached at 703-308-3248. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CAF
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2-23-04

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